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Peritonitis and septic shock--an evaluation of two experimental models in the rat.

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Two different experimental models for inducing septic shock have been characterized. In one, septic shock was induced by intraperitoneal injection of live Escherichia coli bacteria. This resulted in a dose-dependent mortality. Those animals surviving the first 24 h are considered as permanent survivors. In the other models, septic shock and peritonitis was induced by ligation and needle punctures of the cecum. This resulted in a slower development of shock which was almost invariably lethal within 96 h. Arterial blood pressure remained within the normal range in both models for up to 3 h after inducing peritonitis. Then a rapid deterioration was noticed in animals injected with live E. coli. White blood cells and platelets in arterial blood were reduced compared to controls in both groups. This reduction was more pronounced in animals injected with live E. coli. Both models are considered as useful tools in further studies of the pathophysiology of peritonitis and septic shock.

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